

106 THE BASIC OPEN-HE ARTS STEEL PKOCESS

Ledebur communicates through a contribution to " Stahl und Eisen," 1903, p. 694, similar analyses as to the changes of the gas in the conduits. The gas conduits were provided with gas cleansers and water-seals, and the gas temperature between the producer and the cleanser amounted to about 860° and between the cleanser and gas valve to about 760° C. The gases showed compositions as follows :— The loss of combustible value amounts here to

Combustible value:

Calories.		m	Calories.
Before cleaner 3		Gras from 3 kilogrammes	
cubic metre gas 3,795		0 21,864	
Total 1 to 3			
Total 1 to 3			
Behind cleaner 3		Gas from 3 kilogrammes	
cubic metre gas 3,551		C	21,554
Loss in combustible value .		244	310

Thus, taken on original combustible values,

For 1 cubic metre gas, 7 per cent.

For gas from 1 kilogramme C, 1*5 per cent. In another instance, at a temperature of only about 360° C., the gas composition was

Per cent. Per cent. Per cent. Per cent. . (Before cleanser CO2 3-8+CO 28'0+H 12-1+CH4 2-1 *t After cleanser. „ 3-6+ „ 28-4+ „ 11-1 + „ 2-3 , (Before cleanser „ 3'9+ „ 26'2+ „ 12-2+ „ 2-3 °(After cleanser. „ 4'0+ „ 26-0+ „ 12-0+ „ 2-5

Here a change of gas composition was scarcely provable. Professor Mayer (" Stahl und Eisen/" 1908, p. 766) found as a mean

CO2	O	CO	H	CH4	CmH»	N	per	per	per	per
per	per	per cent.	cent.	cent.	cent.	cent.	cent.	cent.	cent.	cent.
Gas in conduits .										
6-4+0-2+23-3+16-6+0-8+0-2+52-5										

Combustible value of the gas in conduits per cubic metre =1,43 5 calories. Combustible value of the gas from regenerator chamber =1,371 calories.

Calculated per 1 kilogramme C this gives

Combustible value of the gas per 1 kilogramme C from conduits 8,280 calories.

Combustible value of the gas per 1 kilogramme C from chambers 8,308 calories,